R E M A R K S

Two paragraphs of the specification have been amended. Claims 1 - 14 have been changed by this amendment. New claims 15-16 have been added by this amendment. Claim 11 is cancelled. Claims 1-10 and 12-16 are now in the application. Replacement drawing sheets are submitted herewith.

Reconsideration of this application is respectfully requested.

Specification Amendment

In the paragraph beginning at page 9, line 7 of the replacement specification, a typographical error has been corrected by adding the word "the".

In the paragraph beginning at page 11, line 24 of the replacement specification, a sentence has been changed by this amendment that was mistranslated from the priority document (PCT/FR96/01657, published as WO 97/16009). The sentence as it occurs (incorrectly) in the replacement specification is: "The purpose of the transmission part 16 of the analog adapter 6 is to produce an analog signal which, when it is sampled, will be equal to one of the nominal levels of the quantization law, the level in question being determined by the digital information transmitted by the digital adapter 5." The original version of the sentence in the priority document is on page 16, lines 8-14. It will be appreciated that the incorrect version of this sentence would likely be interpreted as being contradictory to other statements throughput the application. Furthermore, the last three words of the sentence have been changed to correct an obvious error in both the priority document and the replacements specification ("digital adapter 5" is changed to "analog adapter 6"). This error is obvious in view of the introductory words of the paragraph ('from the analog adapter 6 to the digital adapter 5")..

The incorrect version of the sentence is in contradiction with the statements at the following places in the specification:

Page 2, lines 11-13

Page 3, line 25 to page 4, line 3

Page 5, lines 21-29

Page 8, lines 22-29

Page 12, lines 3-12.

Page 12, lines 13-17

Page 12, lines 18-21

Original claims 3 and 12.

The sentence has been revised to correspond to the language in the priority document, as follows:

"The purpose of the transmission part 16 of the analog adapter 6 is to produce an analog signal which, when it is sampled, has a value which, in the absence of noise and echo, would be easily forecast as a function of the digital information transmitted by the analog adapter 6."

Replacement Drawing Sheets

The drawings have been redrawn to overcome the rejection based on lack of clarity. Parentheses have been removed from figure element numbers to meet current practices. Figure element numbers showing major portions of an assembly have been underlined to meet current practices. Reference numbers 8 in FIG. 3 have been replaced with reference numbers 7. This was an obvious error. No new matter has been introduced.

Claim Amendments

Claim 1 is amended to change "device for communication" to "communication system" for clarity. Claims 2-20 correspondingly change "device" to "system".

Claim Rejections - 35 U.S.C. § 102(e):

Claims 1 and 2 were rejected under 35 U.S.C. 102(e) as being anticipated by Davis et al (US-5,483,530).

Claim 1 is modified to more clearly describe a communication system comprising a digital adapter (5) linked to an analog adapter (6) and to correct antecedent basis issues. For analogy to applicant's analog adapter, Davis makes reference only to traditional analog modems of the time when Davis was filed, which transmitted and received analog signals based on combinations of analog waveforms, wherein each analog waveform represented a digital value. Claim 1 states that digital information from the analog adapter (6) is sent to the digital adaptor (5), and vice versa, in the digital form without emulating an analog signal. Davis clearly emulates an analog signal in both upstream and downstream directions, when communicating with the analog modem. (Davis Col. 4, lines 54-59 and Col. 5, lines 2-8, and Davis claim 1). This is sufficient to overcome the rejection of claim 1 based on Davis.

Applicant believes that claim 1 as amended is patentably distinguishable from Davis, and is patentably distinguishable from Davis in any combination with any of the art cited in this application.

Claim 2 is amended for antecedent basis issues. Claim 2 depends upon claim 1, and inasmuch as Applicant believes that claim 1 is patentable, claim 2 is believed to be patentable.

Claim Rejections - 35 U.S.C. § 103(a)

Claims 3, 7, 10, and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Herzberg et al. (US-5,710,790)

Claim 3 is changed to correct antecedent basis issues.

Claim 12 is changed by removing the last two elements of claim 12 to new claim 15, and by clarifications that correct antecedent basis issues and potential technical ambiguity.

Claims 3 and 12 were rejected by the examiner using a combination of Davis and Herzberg. As the examiner states in the rejection of claim 3, "Davis is silent with respect to construction of analog adapter other than to disclose that his digital adapter is interoperable with an analog adapter." Further in the rejection of claim 3, the examiner states that "Herzberg discloses a device wherein … an analog transmitter situated in digital adapter (see figure 9, 5)

and able to transmit, to an digital receiver situated in digital adapter, an analog signal such that …, without value having to be equal to quantization law."

However, Herzberg's teachings clearly require that the values that are transmitted by the analog adapter are arranged to equate to a level of the quantization law (Herzberg col. 2, lines 45-47, col. 3, lines 6-9, and Herzberg claim 1). Thus, Herzberg teaches away from applicant's invention claimed in claims 3 and 12, and for this reason, applicants believe that claims 3 and 12 are patentably distinguishable from Davis in combination with Herzberg, or any combination of Herzberg, Davis, and other prior art cited in this application.

Claims 7 and 10 depend upon claim 1. Inasmuch as Applicant believes that claim 1 is patentable, claims 7 and 10 are believed to be patentable.

Claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in further view of Caloyannides (US-4,032,762)

Claims 8 and 9 ultimately depend upon claim 1, and inasmuch as Applicant believes that claim 1 is patentable, claims 8 and 9 are believed to be patentable. Notwithstanding this reason, Claim 8 is believed to be patentably distinguishable from Caloyannides for the reasons given below with reference to claim 13.

Claims 4-6, 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Caloyannides.

Claims 4 - 6 ultimately depend upon claim 1 and inasmuch as Applicant believes that claim 1 is patentable, claims 4 and 6 are believed to be patentable. Notwithstanding this reason, Claim 4 is believed to be patentably distinguishable from Caloyannides for the reasons given below with reference to claim 13.

Applicant has amended claim 13 only for improved antecedent basis and to more clearly make it a claim to the analog adapter, and not to overcome the examiner's rejections. Applicant respectfully traverses the examiner's rejection of claim 13, which is based on a combination of Davis and Caloyannides. Davis makes reference only to "PSTN modems", available at the time when Davis was filed, which receive analog signals and decode them as being based on analog

waveforms determined from the digital information of a digital source. The examiner states: "Davis is silent with respect to equalization of analog adapter." The examiner further states "Calyonnides discloses an adaptive equalizer for receiving an analog class IV partial responses signal (see column 3, lines 1-13). It would have been obvious to one of ordinary skill in the art at the time of invention that Caloyannides adaptive equalizer would have been useful in a system as it is defied as being operable as a digital device and that …" At column 3, lines 1-13, Caloyannides states "FIG. 4 illustrates the signal which would be received at the receiver as a result of transmission of a single pulse from the transmitter, if all filtering were done at the transmitter. …This is the familiar Type IV form of Partial Response Coding…". This does not describe an adaptive linear equalizer that forms a partial response output. The adaptive filter is later described in Calyonnides at column 3, lines 61-63: "What is required, therefore, is an adaptive filter with changes its characteristics in accordance with changes in the telephone line filter like characteristics. Accordingly, an adaptive equalizer 34 conventionally is provided to overcome the shortcomings of the telephone line." Thus, Caloyannides does not describe applicant's claimed "an adaptive linear equalizer that forms a partial response output".

Claim 14 is changed to correct an obvious typographic error. Claim 14 depends upon claim 13 and inasmuch as Applicant believes that claim 13 is patentable, claim 14 is believed to be patentable. Notwithstanding this reason, Claim 14 is believed to be patentably distinguishable from Davis in combination with Caloyannides. The examiner cites Davis, col. 9, line 62- col. 10, line 14 as disclosing equivalents to claim 14. But Davis, in describing making a calls to an analog device (analogous to applicant's means (15), which receives signals in the analog adapter), describes that "the proper waveform will be emitted to the analog modem". The analog modem being referred to is the Davis' PSTN modem, which could only analyze the received waveform as an analog signal, not a series of voltage levels in which each voltage level represents a group of bits.

Applicant therefore believes that amended claims 13 and 14 are patentably distinguishable over a combination of Davis and Caloynnides, and over any combination of the art cited in this application.

Applicant notes that any amendments or claim cancellations made herein and not substantively discussed above are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such amendments or cancellations not substantively discussed. Furthermore, any remarks made herein with respect to a given claim or amendment are intended only in the context of that specific claim or amendment, and should not be applied to other claims, amendments, or aspects of applicant's invention.

Applicant specifically reserves the right to prosecute claims of differing and broader scope than those presented herein, in a continuation application.

Accordingly, this application is believed to be in proper form for allowance and an early notice of allowance is respectfully requested.

Please charge any fees associated herewith, including extension of time fees, to 502117.

Respectfully submitted,

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